

SEQUENCE LISTING

<110> AKZO Nobel N.V.

<120> Shiga-like toxin vaccine

<130> 2003.006

<160> 4

<170> PatentIn version 3.2

<210> 1

<211> 1325

<212> DNA

<213> Escherichia coli

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<221> CDS

<222> (1)..(954)

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Phe Ser Ser Val Ser Tyr Ser Gln Glu Phe Thr Ile Asp Phe Ser Thr	
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caa caa agt tat gta tct tcg tta aat agt ata cgg aca gtg ata tcg	144
Gln Gln Ser Tyr Val Ser Ser Leu Asn Ser Ile Arg Thr Val Ile Ser	
35 40 45	
acc cct ctt gaa cat ata tct cag gga gct aca tcg gta tcc gtt att	192
Thr Pro Leu Glu His Ile Ser Gln Gly Ala Thr Ser Val Ser Val Ile	
50 55 60	
aat cat aca cca cca gga agt tat att tcc gta ggt ata cga ggg ctt	240
Asn His Thr Pro Pro Gly Ser Tyr Ile Ser Val Gly Ile Arg Gly Leu	
65 70 75 80	
gat gtt tat cag gag cgt ttt gac cat ctt cgt ctg att att gaa cga	288
Asp Val Tyr Gln Glu Arg Phe Asp His Leu Arg Leu Ile Ile Glu Arg	
85 90 95	
aat aat tta tat gtg gct gga ttt gtt aat acg aca aca aat act ttc	336
Asn Asn Leu Tyr Val Ala Gly Phe Val Asn Thr Thr Thr Asn Thr Phe	
100 105 110	
tac aga ttt tca gat ttt gca cat ata tca ttg ccc ggt gtg aca act	384
Tyr Arg Phe Ser Asp Phe Ala His Ile Ser Leu Pro Gly Val Thr Thr	
115 120 125	
att tcc atg aca acg gac agc agt tat acc act ctg caa cgt gtc gca	432
Ile Ser Met Thr Thr Asp Ser Ser Tyr Thr Thr Leu Gln Arg Val Ala	
130 135 140	
gcg ctg gaa cgt tcc gga atg caa atc agt cgt cac tca ctg gtt tca	480
Ala Leu Glu Arg Ser Gly Met Gln Ile Ser Arg His Ser Leu Val Ser	
145 150 155 160	

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tca tat ctg gcg tta atg gag ttc agt ggt aat aca atg acc aga gat Ser Tyr Leu Ala Leu Met Glu Phe Ser Gly Asn Thr Met Thr Arg Asp 165 170 175	528
gca tca aga gca gtt ctg cgt ttt gtc act gtc aca gca gaa gcc tta Ala Ser Arg Ala Val Leu Arg Phe Val Thr Val Thr Ala Glu Ala Leu 180 185 190	576
cgg ttc agg caa ata cag aga gaa ttt cgt ctg gca ctg tct gaa act Arg Phe Arg Gln Ile Gln Arg Glu Phe Arg Leu Ala Leu Ser Glu Thr 195 200 205	624
gct cct gtt tat acg atg acg ccg gaa gac gtg gac ctc act ctg aac Ala Pro Val Tyr Thr Met Thr Pro Glu Asp Val Asp Leu Thr Leu Asn 210 215 220	672
tgg ggg aga atc agc aat gtg ctt ccg gag tat cgg gga gag gct ggt Trp Gly Arg Ile Ser Asn Val Leu Pro Glu Tyr Arg Gly Glu Ala Gly 225 230 235 240	720
gtc aga gtg ggg aga ata tcc ttt aat aat ata tca gcg ata ctt ggt Val Arg Val Gly Arg Ile Ser Phe Asn Asn Ile Ser Ala Ile Leu Gly 245 250 255	768
act gtg gcc gtt ata ctg aat tgt gga aat tca tca aga aca atc aca Thr Val Ala Val Ile Leu Asn Cys Gly Asn Ser Ser Arg Thr Ile Thr 260 265 270	816
ggt gat act tgt aat gag gag acc cag aat ctg agc aca ata tat ctc Gly Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr Ile Tyr Leu 275 280 285	864
agg gaa tat caa tca aaa gtt aag agg cag ata ttt tca gac tat cag Arg Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser Asp Tyr Gln 290 295 300	912
tca gag gtt gac ata tat aac aga att cgg gat gaa tta tga Ser Glu Val Asp Ile Tyr Asn Arg Ile Arg Asp Glu Leu 305 310 315	954
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<211> 317

<212> PRT

<213> Escherichia coli

<400> 2

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3

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Gln	Gln	Ser	Tyr	Val	Ser	Ser	Leu	Asn	Ser	Ile	Arg	Thr	Val	Ile	Ser
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Asp	Val	Tyr	Gln	Glu	Arg	Phe	Asp	His	Leu	Arg	Leu	Ile	Ile	Glu	Arg
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Tyr	Arg	Phe	Ser	Asp	Phe	Ala	His	Ile	Ser	Leu	Pro	Gly	Val	Thr	Thr
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Ala	Leu	Glu	Arg	Ser	Gly	Met	Gln	Ile	Ser	Arg	His	Ser	Leu	Val	Ser
145					150					155					160
Ser	Tyr	Leu	Ala	Leu	Met	Glu	Phe	Ser	Gly	Asn	Thr	Met	Thr	Arg	Asp
				165					170					175	
Ala	Ser	Arg	Ala	Val	Leu	Arg	Phe	Val	Thr	Val	Thr	Ala	Glu	Ala	Leu
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Arg	Phe	Arg	Gln	Ile	Gln	Arg	Glu	Phe	Arg	Leu	Ala	Leu	Ser	Glu	Thr
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Trp	Gly	Arg	Ile	Ser	Asn	Val	Leu	Pro	Glu	Tyr	Arg	Gly	Glu	Ala	Gly
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Val	Arg	Val	Gly	Arg	Ile	Ser	Phe	Asn	Asn	Ile	Ser	Ala	Ile	Leu	Gly
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Thr Val Ala Val Ile Leu Asn Cys Gly Asn Ser Ser Arg Thr Ile Thr
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Gly Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr Ile Tyr Leu
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Arg Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser Asp Tyr Gln
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Ser Glu Val Asp Ile Tyr Asn Arg Ile Arg Asp Glu Leu
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<222> (951)..(1322)

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caacgtgtcg cagcgctgga acgttccgga atgcaaata gtcgtcactc actggtttca 480
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gtcagagtgg ggagaatata ctttaataat atatcagcga tacttggtac tgtggccggt 780
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tcagactatc agtcagaggt tgacatatat aacagaattc gggatgaatt atg aat 956
Met Asn
1

aaa gta aaa tgt tat gtt tta ttt acg gcg tta cta tcc tct cta tat 1004
Lys Val Lys Cys Tyr Val Leu Phe Thr Ala Leu Leu Ser Ser Leu Tyr

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Ala His Gly Ala Pro Gln Thr Ile Thr Glu Leu Cys Ser Glu Tyr Arg			
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aac aca caa ata tat acg ata aat gac aag ata cta tca tat acg gaa			1100
Asn Thr Gln Ile Tyr Thr Ile Asn Asp Lys Ile Leu Ser Tyr Thr Glu			
35	40	45	50
tcg atg gca ggc aaa aga gaa atg gtt atc att aca ttt aag agc ggc			1148
Ser Met Ala Gly Lys Arg Glu Met Val Ile Ile Thr Phe Lys Ser Gly			
	55	60	65
gaa aca ttt cag gtc gaa gtc ccg ggc agt caa cat ata gac tcc cag			1196
Glu Thr Phe Gln Val Glu Val Pro Gly Ser Gln His Ile Asp Ser Gln			
	70	75	80
aaa aaa gcc att gaa agg atg aag gac aca tta aga atc aca tat ctg			1244
Lys Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile Thr Tyr Leu			
	85	90	95
acc gag acc aaa att gat aaa tta tgt gta tgg aat aat aaa acc ccc			1292
Thr Glu Thr Lys Ile Asp Lys Leu Cys Val Trp Asn Asn Lys Thr Pro			
	100	105	110
aat tca att gcg gca atc agt atg aaa aac tag			1325
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Ser Gly Glu Thr Phe Gln Val Glu Val Pro Gly Ser Gln His Ile Asp	
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Ser Gln Lys Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile Thr	
85	95
Tyr Leu Thr Glu Thr Lys Ile Asp Lys Leu Cys Val Trp Asn Asn Lys	

USSN 10/565,1836

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100105110

Thr Pro Asn Ser Ile Ala Ala Ile Ser Met Lys Asn

115120